SEX ROLE, SPORT COMPETITION ANXIETY AND PERCEPTIONS OF WOMEN'S ROLES AND SPORTS AMONG SPORTSWOMEN

A thesis submitted in partial fulfilment

of the requirements for the Degree

of

Master of Arts in Psychology

in the

University of Canterbury

by

K. Nicholl

University of Canterbury

1990

Acknowledgements

Grateful thanks to Ken Strongman for his encouragement and advice in the supervision of this thesis. I would also like to thank my family, and friends, especially Rob, for their support and patience. Thanks also to the many people in the Psychology Department who helped in various ways. Finally I would like to thank all of the subjects for their co-operation and time.

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

ABSTRACT

This study was designed to assess differences in sex role and sport competition anxiety and feelings about women's roles and sports in women involved in highly competitive and moderately competitive hockey, and non-competitive sports. The Bem Sex Role Inventory, one of two forms of the Sport Competition Anxiety Test (SCAT), and questions assessing feelings about women and sport were given to all subjects.

The highly competitive women were significantly higher in masculine traits, and were significantly lower in feminine traits than the non-competitive women. There were no differences in sport competition anxiety according to sex role. Sport competition anxiety was significantly higher among the non-competitive women than the highly competitive women.

Overall the women indicated that although they feel that sports participation does not enhance feelings of femininity, it does not conflict with women's roles, men do not perceive sportswomen negatively, and sport enhances self-esteem. They also indicated that sport is important in their lives, and that women's sports are as significant as men's. The highly competitive group more strongly believed in the importance of women's sports. The highly competitive and moderately competitive groups felt that they receive more support for their sport than the non-competitive group. There were no other differences in responses to the women's roles and sports questions for sex role or sport participation group. Low sport competition anxiety was associated with agreeing strongly that others support one's sport participation. There was a tendency for high sport competition anxiety to be associated with the worry that time spent on sport would be better spent on other things. No other of the women's roles and sports questions were related to sport competition anxiety.

It was concluded that the women enjoy sport and do not perceive it as negatively effecting them. Anxiety about competitive sport may have been due to differences in competence and experience in competitive sport.

FOREWORD

"And in sports the end in view is not success independent of physical equipment; it is rather the attainment of perfection within the limitations of each physical type: the feather-weight boxing champion is as much a champion as is the heavy-weight; the woman ski-ing champion is not the inferior of the faster male champion: they belong to two different classes. It is precisely the female athletes who, being positively interested in their own game, feel themselves least handicapped in comparison with the male."

Simone de Beauvoir

The Second Sex (1969 : p 73)

CHAPTER 1

INTRODUCTION

1.1 General Introduction

Sport is a complex phenomenon which acts as an important agent of social change and social control, modifying and defining women's roles in society. Sport is a conservative institution which has many rituals, symbols and preconceptions which instil, affirm and reinforce idealised and dominant societal values (McCrone, 1988).

Sport is an extremely prevalent and pervasive aspect of New Zealand society. However, in New Zealand, as in other parts of the world, there is a paucity of early documentation pertaining to women's involvement in sport. Only relatively recently has a body of literature been established surrounding women's roles in sport.

The areas of sport psychology, sport sociology, sex roles and historical sport and leisure literature, upon which this thesis is based, provide documentation about women's involvement in sport.

1.2 Historical Perspectives on Women's Involvement in Sport

Much of the early literature about women and sport originated in England and America during the Victorian period. At this time sport participation for women was uncommon and viewed as inappropriate and unfeminine.

Men's attempts to keep women out of sport largely stemmed from fears that in sport, as in other male dominated areas, women would take over. It was feared that this would lead to fundamental changes in the definitions of masculine and feminine, and the whole social order which men had always controlled (McCrone, 1988; Mrozek, 1987).

Myths concerning womens lack of suitability for sport abounded,

helping to reflect and dictate the social norms which ensured that men continued their domination in sport. Arguments upon which the myths were based were put forward by medical practitioners such as Dr Edward Clarke at Harvard and Dr Henry Maudsley at University College in London. These arguments were founded, not on medical fact, but rather in social processes perpetuating that the differences in both sexes biological and physical function dictated significant differences in behaviour and roles.

Females were believed to be weak, with a limited amount of energy; most of which is required for the development of reproductive organs. It was thought that sport would endanger childbearing because of the belief that the expenditure of energy in one area meant that it was taken away from another. Also, because women were perceived to be governed by their reproductive system, they were seen to be sexual creatures, out of control of their emotions, and therefore physically and emotionally unfit to undergo the rigours of sport (eg. McCrone, 1988; Dirix,1869; cited in Smith-Rosenberg and Rosenberg, 1987).

It was thought that sports participation would make a woman unattractive by masculinising her and therefore render her undesirable for marriage (McCrone, 1988).

At this time the role of women in sport was passive, comprising support and applause for men. Pierre de Coubertin, the founder of the modern Olympic Games, encapsulated the prevailing feeling of the time in his description of the Games as "... the solemn and periodic exaltation of male athleticism [with] internationalism as its base, loyalty as the means, art for its setting, and female applause as its reward." (quoted in Biles, 1984 : p 64; cited in Williams et al., 1985).

Feminists began to claim that sport and exercise was beneficial for women. For example, Mary Wollstonecraft, although acknowledging the superior bodily strength of men, urged women to take up masculine forms of exercise to challenge men's natural superiority. She also warned that bodily dependence produces mental dependence, and weak mothers weak children (Wollstonecraft, 1792; cited in McCrone, 1988).

While Victorian society was becoming more conservative, gradually

more writers of both sexes began to espouse the view that it may be better for women to exercise in order to strengthen themselves for childbearing and providing for their families. For example Lant Carpenter (1820), Donald Walker (1836), and Herbert Spencer (1859) all ascribed to the view that exercise for women, albeit moderate and ladylike, would aid in the furthering of a strong and healthy race (McCrone, 1988).

As part of the tremendous growth in sports during the 1890's, more women were becoming involved in sport. This was largely due to the institutionalisation of women's sport in schools and universities, initiated by Oxford and Cambridge.

However, women's sport remained separate from and different to men's. Whilst men's sport was public, with much glorification of winners; women's sport was cloistered, and successes were acknowledged quietly and modestly.

Women's sporting efforts were almost entirely judged against the criteria of men's standards, and consequently were trivialised, seen as not significant, and were the source of humour.

In colonial New Zealand, physical activity for women was legitimated through necessity because of an extreme shortage of labour. However sport participation for women was governed by the same prejudices and beliefs that held in Victorian England. It was not until the establishment of schools such as Otago Girls High School, with organised physical education programmes, that sports participation began to be accepted.

Field hockey, founded in 1897, became one of New Zealand's earliest formalised and institutionalised sporting events for women. Although the feminine ideal was still gentle and graceful, hockey was not considered inappropriate for women. Compared to other countries, sport has never been as restrictive or discriminatory for women throughout the course of New Zealand's history (Crawford, 1987).

During the twentieth century many people have questioned the premise that women are too delicate to participate in sports. It is now recognised by the medical profession that women are physically capable of performing in sport

without damage to their gynacology (eg. Jokl, 1964; cited in Zoble, 1972; Ryan, 1975; cited in Wilmore, 1977).

However although women are physiologically freed by science to participate in sports, society still seems in many cases to be unable to accept physical differences in body build and composition, cardiovascular endurance, strength and motor abilities between the sexes without prejudices concerning women's suitability for sport (Harris, 1975). The physiological and physical differences between the sexes are apparent and universal, however the psychological and emotional differences are less obvious.

CHAPTER 2

LITERATURE REVIEW

2.1 Sport and Sex Role Socialisation

Although we are born male or female, to a large extent we learn to be 'masculine' or 'feminine' in a way that is appropriate to the society in which we live. Sport is used as a means of socialising males to be masculine by reinforcing the instrumental traits of strength, independence, assertiveness and dominance. These traits are regarded as desirable in males, and are believed to enhance self-esteem and feelings of masculinity.

However sport socialisation for females is at variance with sex role socialisation because the masculine traits emphasised in sport and physical play are discouraged in females, while expressive and nurturant behaviours are encouraged (Greendorfer, 1983; cited in Colley, 1986).

On the whole, females are socialised not to participate, but rather to use their bodies to attract and please others, while males are socialised to derive pleasure from themselves alone, by developing a variety of physical, instrumental skills (Harris, 1979; 1981).

2.2 Role Conflict and Self Perceptions of Sportswomen

Many writings based mainly on anecdotal evidence suggest that because many of the traits valuable for sport participation are perceived as being masculine; and because masculine and feminine traits are often regarded as mutually exclusive rather than independent, many women feel conflicts about sport and femininity. Women's problems in sport have their basis in the perceived dissonance or conflict between their roles as woman and sportsperson (eg. Harris, 1979; 1981; Felshin, 1976; Hart, 1976; Del Ray, 1978).

However empirical studies have found that the number of female athletes perceiving or experiencing role conflict is lower than previously expected.

Sage and Loudermilk (1979) analysed the nature of role conflict in 268 female college athletes. They found that 26 percent of their total sample perceived role conflict to be a great or very great problem. Twenty percent of the sample responded that they experienced role conflict to a great or very great degree. However 44 percent of their sample responded that they did not perceive role conflict to be a problem, and 46 percent indicated that they did not experience role conflict.

Similarly Anthrop and Allison (1983) found that of the 133 female high school athletes for whom role conflict was assessed, 16 percent perceived role conflict to be problematic, while 11 percent indicated that they experienced problems with role conflict. Thirty-two percent of their subjects perceived, and 50 percent experienced little or no role conflict.

Both of these researchers suggested that the lower than expected levels of role conflict among their subjects could be due to the fact that many of the women who had perceived or experienced role conflict had already withdrawn from athletic competition. Secondly, they suggest that the female athlete may have reconciled role conflict and gained a positive self-image, because she may perceive sports participation as enhancing rather than detracting from her femininity.

Other researchers have also found that sports participation positively benefits some women. For example Snyder and Kivlin (1975) and Snyder and Spreitzer (1976) found that for their teenage female samples, the athletes tended to have more favourable body-images and self-concepts than the non-athletes. Similarly Kukla and Pargman (1976) and Del Ray and Sheppard (1981) both found that sports participation enhanced the self-esteem of women athletes in their samples.

However many differences have been found between women athletes participating in traditionally socially-acceptable sports such as tennis, gymnastics and golf; and those who participate in sports deemed unacceptable for women, such as basketball, hockey and team sports in general.

For instance Snyder and Kivlin (1975) found that basketballers and track athletes felt less feminine and had lower feelings of well-being than gymnasts. Snyder and Spreitzer (1976) found that a much higher proportion of

gymnasts perceived themselves as "very feminine" in comparison to the basketballers in their study.

Anthrop and Allison (1983) found a tendency for the female athletes participating in traditionally non socially acceptable sports to perceive and experience more role conflict than those in socially acceptable sports. This finding supports earlier findings of Sage and Loudermilk (1979) and Metheny (1965; cited in Anthrop and Allison, 1983).

2.3 Perceptions of Women in Sport

Conflicts that women experience in relation to participation in sport are exacerbated by common negative stereotypes of sportswomen that continue to persist.

Many female athletes, especially those participating in sports which are regarded as masculine, feel that there is a negative stigma attached to them because of the sport in which they participate (eg. Snyder and Kivlin, 1975; Fisher et al., 1977; cited in Anthrop and Allison, 1983).

It is commonly believed that competitive sports participation masculinises the female athlete physically, psychologically and behaviourally. This perception is often accompanied by the impression that sports participation is associated with a loss to a woman's femininity (eg. Sherriff, 1971; cited in Anthrop and Allison, 1983; Harris, 1975; 1979; 1981).

Attitudes towards women in sport are changing, although the rate of this change has up until recently been very slow. Harres (1968), DeBacy et al. (1970) and Selby and Lewko (1976) found that overall their subjects had reasonably favourable attitudes towards sportswomen. However differences in attitudes were found between the sexes, with women's and girl's attitudes being not surprisingly more positive than men's and boy's. There were also great differences in attitudes within the various groups sampled.

Negative stereotypes of sportswomen and traditional views of women's sport are being perpetuated by the news media and society at large by not giving as much recognition to women's achievements in sport as men's (Dyer, 1982; cited in Colley, 1986). This view is also endorsed by Jill Ford, manager of the

Hilary Commission's Women in Sport Program who says that in New Zealand, as in other countries, since the media has focused on competitive male sport, many women feel alienated and put off by the image that sport is rough, violent and "sweaty" (Robyns, 1989).

Women's sporting achievements are often trivialised, and in many instances, greater attention is given to the woman's appearance rather than her skill (Dyer, 1982; Boutillier and San Giovanni, 1983; cited in Colley, 1986).

2.4 Sport Participation and Sex Role

Gender role personality characteristics seem to have implications for sporting activities, since sport, particularly of a competitive nature, typically requires behaviours that we would label masculine or instrumental (Gill, 1986).

Although findings have been discrepant and of varying quality, many studies have confirmed this by comparing sex role differences between groups of highly competitive, moderately competitive or recreational, and non-competitive or non-athletic subjects.

There is considerable evidence to suggest that relatively higher proportions of women in highly competitive sports groups endorse a masculine or androgynous sex role, as classified by the Bem Sex Role Inventory or the Personal Attributes Questionnaire, compared to groups comprising moderately competitive or non-competitive women (eg. Myers and Lips, 1978; Uguccioni and Ballantyne, 1980; Edwards, Gordin and Henschen, 1984; Colley, Roberts and Chipps, 1985; Hall, Durborow and Progen, 1986).

Research also suggests that moderately competitive and non-competitive female subject groups contain more subjects with a feminine sex role, compared to highly competitive subject groups (eg. Myers and Lips,1978; Colker and Widom, 1980; Uggucioni and Ballantyne, 1980; Colley, Roberts and Chipps, 1985).

Chalip, Villiger and Duignan (1980) studied sex role identity in a select sample of New Zealand women hockey players. They hypothesised that the sample of 23 intensively involved sportswomen would contain a significantly higher than chance proportion of androgynous women. Using the Bem Sex

Role Inventory which was scored with the median-split technique, 15 (65.22%) of the subjects were classified as androgynous, 3 (13.04%) were classified as masculine, 3 as feminine and 2 (8.69%) were undifferentiated. These findings were then compared to normative frequencies from 100 New Zealand women of similar age, socio-economic status and community found by Villiger (1977; cited in Chalip, Villiger and Duignan, 1980) which conformed closely to norms reported in the United States (Bem, 1974) and other New Zealand samples (eg. Packham, 1976; cited in Chalip, Villiger and Duignan, 1980). Using the chi squared test, a significant difference was found between the hockey sample and the normative samples.

Researchers in this area have typically reached two possible conclusions regarding the relatively high incidence of masculine traits among competitive sportswomen, as indicated by the number of women classified as masculine or androgynous. Firstly, they conclude that women with high degrees of masculine traits may be attracted by the competitive element in some sports. Secondly, it may be that the competitive process and the conditions of sport may lead to an increase in masculine traits.

2.5 Sex and Sex Role Differences in Sport Competition Anxiety

Sex differences in competitive trait anxiety have been documented since the development of the Sport Competition Anxiety Test (Martens, 1977). Many studies which have investigated differences in competitive trait anxiety, according to sex and sex role have produced interesting and contradictory results.

Owie (1981) found that feminine females had significantly higher competitive trait anxiety than masculine males, but no differences were found between males and females with other sex role classifications. Owie's finding supported the earlier finding of Wark and Wittig (1979). However Wark and Wittig's study compared only sex-typed subjects, as just four subjects of each sex were identified as sex-reversed out of over 400 students sampled. Therefore any determination of the influence of sex and/or sex role is impossible.

In an effort to expand the Wark and Wittig study, Wittig (1984) classified the gender roles of 439 male and female subjects using five

classifications from the Bem Sex Role Inventory - masculine, near masculine, androgynous, near feminine and feminine - based upon the t-ratio scoring method. No differences were found between any of the female groups. The masculine males were found to be less anxious than all other groups except the near masculine males and females. Feminine males were more anxious than all groups except the near feminine males.

However these results can only be treated as suggestive because of methodological and statistical problems. Cell sizes for each sex role group varied greatly. Also, post-hoc analysis involved 45 t-tests, which means that because of alpha slippage, any significant results must be regarded as suspect (Andersen and Williams, 1987).

Segal and Weinberg (1984) found that males were significantly lower than females in sport competition anxiety, regardless of sex role. This sex effect was upheld even when the frequency, competitiveness and personal importance of participation in competitive sports was held constant. There were no significant differences in competitive anxiety according to sex role, and the sex by sex role interaction was not significant.

By contrast, Colley, Roberts and Chipps (1985) found no sex differences in competitive trait anxiety among a group of sex-typed individuals. However, their results involved sports people of varying competitive levels, which were not taken into account and may have influenced the findings.

Using a three factor (gender x feminine role endorsement x masculine role endorsement) design, Wittig, Duncan and Schurr (1987) found that males generally had lower competitive trait anxiety than females. For both sexes, individuals with high masculine role endorsements, that is the masculine and androgynous subjects, had lower anxiety than individuals with low masculine role endorsements, (the feminine and undifferentiated subjects). Masculine males were lowest in anxiety, while feminine females were the highest.

Results from these findings have been interpreted in terms of the differential socialisation of men and women. This leads to anxiety about sport competition for many women who perceive that sport is a masculine activity.

Because none of these studies had any clear theoretical background from

which to explain and predict differences in sport competition anxiety across gender role classifications, Andersen and Williams (1987) sought to test implications from Bem's (1981) gender schema theory.

They replicated Wittig's (1984) study using more balanced cell sizes and more appropriate statistical techniques. For inclusion in the study, subjects selected were those whose sex role was classified as masculine, feminine or androgynous according to both the t-ratio and the median split scoring methods.

Andersen and Williams found that feminine females had the highest levels of sport competition anxiety in comparison with all other groups. Their hypothesis that feminine females would be significantly more anxious than masculine males was supported. This was interpreted as supporting gender schema theory, in that these two groups process information in terms of gender schema, and therefore view the masculine domain of sport competition very differently.

The hypothesis that androgynous subjects would view sport aschematically and would therefore have anxiety levels between those of feminine females and masculine males, was supported by the anxiety scores of the androgynous females. This supports gender schema theory, since androgynous individuals, processing information aschematically, do not feel highly anxious about sport competition. However, the androgynous males scores are much less clear. Also uncertain are the results of the cross sex-typed subjects. The authors interpret the results overall as providing partial support for gender schema theory.

2.6 Sport Competition Anxiety and Sport Participation Level

There is a paucity of research investigating the effect that differing levels of sport participation have on sport competition anxiety. Most of the work on sport anxiety has used either sports people of the same participative or competitive level, or students of unspecified levels of sporting involvement.

McKelvie and Huband (1980) failed to find differences in competitive anxiety between 93 non-athletic students and 92 students who were university representatives for basketball, hockey and soccer. In this study males' and females' Sport Competition Anxiety Test scores were not analysed separately.

Similarly, Colley, Roberts and Chipps (1985) found that competitive trait anxiety did not vary according to sport participation group. However their analysis compared the SCAT scores of non-participant, team and individual sports groups for both the male and female students.

Power (1982) compared sport anxiety of male track and field athletes of different competitive levels. Five groups comprising 14 Division 4 English, 9 Division 1 Welsh, 19 Irish international, 17 Welsh international and 6 English international athletes were compared. The English International and the Division 4 athletes were found to have significantly higher levels of competitive anxiety relative to all other groups. However, conclusions regarding differences across levels of competition must be tentative because results may be due to nationality differences, and the English international group was extremely small (N = 6).

Smith (1983) found differences in competitive anxiety in girls and boys aged 10, 11, 12, and 13, who were all athletes competing in club basketball and football (boys), and softball and volleyball (girls). The children's coaches had to identify the playing status of each child as "all-star", "regular starter", and "playing substitute". No differences in anxiety were found for age, sex or race. However, all-star athletes were found to have significantly lower SCAT scores than the playing substitutes.

Smith interpreted these results as meaning one of two things; either higher status athletes are less anxious because they are more skilled, and therefore experience greater success, or perhaps those athletes with lower anxiety are the ones more likely to succeed.

A similar study was conducted by Miller and Miller (1985), who investigated differences in competitive anxiety amongst elite female netball players. Subjects comprised members of the Australian squad preparing for the 1983 world netball tournament. For the purposes of this study, the initial squad was divided into successful players; those who made the final team (N = 12), and those who did not (N = 8). No significant differences were found between the anxiety scores of these two small groups.

2.7 Rationale

Research surrounding women's roles, anxiety and conflict in relation to sport competition suffers from a strong North American bias. Additionally, most of the empirical studies investigating sport anxiety have utilised student samples rather than sportswomen of differing competitive levels.

Researchers have outlined the need to examine why women feel anxious about sport, rather than merely examining whether differences exist according to sex role orientation and/or sport participation level.

The aim of this study was to investigate in a New Zealand sample, the influences of sex role and level of sporting involvement on sport competition anxiety among highly competitive and moderately competitive hockey players, and women who may or may not be involved in sport on a casual non-competitive basis. The study examined factors believed to be related to women's feelings of anxiety about competitive sport.

Hockey players were used because it was felt that if anxiety and role conflicts existed among New Zealand sportswomen, they would most likely be expressed by hockey players, since hockey is seen to be a relatively masculine sport involving speed, aggression and physical confrontation.

2.8 Research Questions and Hypotheses

1. Sex Role and Sport Participation Group

The proportion of women in each sex role category was compared across the three sports participation groups.

Hypothesis 1: The highly competitive group will contain a higher proportion of masculine and androgynous subjects than the moderately competitive and non-competitive groups.

Hypothesis 2: The moderately competitive and the non-competitive groups will contain a higher proportion of feminine subjects than the highly competitive

group.

2. Sport Competition Anxiety

SCAT scores were compared for each sex role group and each sport participation group.

Hypothesis 3: Subjects with a feminine sex role will have the highest levels of sport competition anxiety.

No hypothesis was developed concerning sport participation group and SCAT score.

3. Women's Roles and Sports

Feelings about women's roles and sports were compared for the sex role groups and the sport participation groups.

Group differences in feelings about femininity and sport, role conflict, what men think, self-esteem, the importance of sport in one's life, and the importance of women's sport were investigated. There were no hypotheses regarding sex role or sport group difference for any of these areas.

4. Women's Roles and Sports and Sport Competition Anxiety

Possible sources of anxiety were investigated by examining the relationship between sport competition anxiety and feelings about femininity and sport, role conflict, what men think, self-esteem and the importance of sport in one's life.

Hypothesis 4: Sport competition anxiety will be associated with the perception that sport participation does not enhance femininity.

Hypothesis 5: Sport competition anxiety will be associated with feelings of role conflict.

Hypothesis 6: Sport competition anxiety will be associated with

feelings that men disapprove of and are put off by women's sport participation.

Hypothesis 7: Sport competition anxiety will be associated with feelings that sport participation does not enhance self-esteem.

No hypothesis was advanced regarding the relationship between sport competition anxiety and the importance of sport in one's life.

CHAPTER 3

METHOD

3.1 Subjects

The subjects were forty-nine females, mostly university students and clerical workers, aged between sixteen and thirty-five years (mean age = 22.94 years).

Eighteen subjects (mean age = 22.2 years) were selected who are not involved in competitive sport. These subjects participate in sport in varying degrees. Some of them occasionally jog, cycle or go to aerobics classes; while others, only very few, do not have any sporting involvement whatsoever. Eleven of these subjects were obtained from a Stage 2 Psychology class. Seven clerical staff were obtained from Christchurch Central Police Station. These women comprised the non-competitive sports participation group.

Sixteen subjects (mean age = 24.7 years) play hockey for either the Carlton or Selwyn senior reserve womens hockey teams. These subjects formed the moderately competitive sports participation group.

Fifteen subjects, (mean age = 23.1 years) play for either the Canterbury A or B women's hockey teams, which are largely formed from members of the Woolston, Burnside, Selwyn and Harewood premier teams. These women comprised the highly competitive sports participation group.

Most of the women in the moderately and highly competitive groups were involved in other sports, both competitive and non-competitive. This was particularly true of the highly competitive group.

3.2 Questionnaires

3.2.1 Bem Sex Role Inventory (BSRI)

This is a sixty item inventory devised by Sandra Bem to measure the extent to which a person self-endorses culturally defined stereotypic masculine and feminine traits. Please refer to Bem (1974) for a complete discussion

regarding the rationale for the inclusion of the adjectives and phrases upon which the BSRI is based. Please see Appendix A for a copy of the BSRI.

Bem developed the inventory and the theoretical framework surrounding psychological androgyny to challenge the traditional assumption that a rigidly sex-typed person (ie. a person who restricts his or her behaviour in accordance with cultural definitions of sex-appropriate behaviour) exemplifies good mental health. Rather, Bem sees an androgynous individual as better able to adapt behaviourally and psychologically in a greater number of situations (Bem, 1974).

The BSRI has come under much criticism. The inventory has been criticised on theoretical and methodological grounds by Pedhazur and Tetenbaum (1979), who criticise the rationale underlying the construction of the inventory as well as its psychometric properties.

Locksley and Colten (1979) criticise the inventory on conceptual grounds, raising questions about the generality of the concept of androgyny, and the applicability of the BSRI and other instruments which purport to measure androgyny. They also question the feasibility of basing the measurement of individual differences in femininity and masculinity on broad cultural stereotypes pertaining to gender roles.

Bem justifies her theoretical position by explaining the BSRI in terms of Gender Schema Theory, which is a theory about the cognitive processing and motivational dynamics of sex-typed and androgynous individuals (Bem, 1979). She also provides research evidence to suggest that sex-typed and androgynous individuals differ in the way in which they process cognitive schemata in terms of gender (Bem, 1981).

Debate has arisen over the scoring of the inventory, and the resultant meanings attached to androgyny. Bem originally advocated the calculation of the t-difference between the scores on the masculine and feminine scales of the inventory (Bem, 1974). Androgyny was then defined as an approximately equal endorsement of feminine and masculine traits in a self-description, while sex-typing was defined as a significantly greater endorsement of either feminine or masculine characteristics.

Later, in response to criticism that the calculation of an androgyny score using the t-ratio does not differentiate between those people who score high in both feminine and masculine traits, and those who score low in both (eg. Spence et al., 1975), Bem adopted a median split scoring technique. According to this scoring method those people who score above the sample median on both the feminine and masculine scales are classified as androgynous, whereas those scoring below the median on both scales have an undifferentiated sex role. However upon reclassification of her original college population, Bem found only one percent of the subjects were classified as undifferentiated.

The median split method of classification, however, has also been criticised (eg. Sedney, 1981; Andersen and Williams, 1987). If subjects are classified according to the medians of the sample to which they belong, then the Bem classifications vary between samples. This does not allow for comparison across studies (Sedney, 1981). Sedney argues that for an instrument to be useful, it should not be necessary for each researcher to develop a normal standardisation sample.

Andersen and Williams (1987) argue against the sole use of the median split technique, saying that the difference of a few hundredths of a point can significantly alter sex role classification. Both of these researchers advocate the use of a combination of both scoring procedures, thereby eliminating those subjects whose classifications conflict for the two methods.

Unfortunately the small size (N = 49) would have made this approach infeasible, therefore it was decided that the t-difference scoring method would be used. The categories of 'near feminine' and 'feminine', were combined, as were 'near masculine' and 'masculine'. This produced three sex role categories: 'feminine', 'androgynous' and 'masculine'.

Subjects were assigned to one of these categories by calculating the t-ratio for the difference between their mean scores on the feminine minus the masculine scales. If $t > 1$, the subject was classified as feminine. This category incorporates Bem's (1974) $t \geq 2.025$ (feminine) and $1 < t < 2.025$ (near feminine) categories. A subject was classified as masculine if $t < -1$; incorporating the $-2.025 < t < -1$ (near masculine) and $t \leq -2.025$ (masculine) categories. Finally, a subject was classified as androgynous if $-1 \leq t \leq +1$.

3.2.2 Sport Competition Anxiety Test (SCAT)

This is a fifteen item questionnaire designed by Rainer Martens (1977) to measure competitive trait anxiety. Competitive trait anxiety is the tendency to perceive competitive situations as threatening and to respond to these situations with feelings of apprehension and tension (Spielberger, 1966).

The SCAT was originally developed for use with children between the ages of ten and fifteen years. Changing the wording of one item on the test is the only difference between the child and adult versions of the test. The normative data are based on over 2500 people, with internal structure, reliability and validity being determined independently for the child and adult forms.

Because the SCAT has such high face validity for its ten items, five spurious items have been added in order to reduce response bias toward the actual test items. These five items are not scored. The scoring procedure is identical for both the child and adult forms of SCAT. For each item, one of three responses is possible: (a) Hardly ever, (b) Sometimes, (c) Often. The ten test items are numbers 2, 3, 5, 6, 8, 9, 11, 12, 14, and 15. The spurious items, 1, 4, 7, 10, and 13 are not scored. Items 2, 3, 5, 8, 9, 12,14 and 15 are worded so that they are scored according to the key:

1 = Often
2 = Sometimes
3 = Hardly Ever

Items 6 and 11 are scored thus:

3 = Often
2 = Sometimes
1 = Hardly Ever

The scores on SCAT range from 10, signifying low competitive trait anxiety, to 30 signifying high competitive trait anxiety.

The SCAT has been criticised as an invalid measure of trait anxiety, since it has been found to be unrelated to physiological indices of anxiety, such as heart rate (Cheatham and Rosentsweig, 1982). However the SCAT is the result of considerable validation experiments explaining the concept of competitive trait anxiety (eg. Martens and Simon, 1976; Martens and Gill,

1976), and it has been widely accepted for use in American college settings (eg. Poteet and Weinberg, 1980; Gerson and Deshaies, 1978). Brand et al. (1988) also reported high internal consistency for the test when used with a group of white South African university athletes.

Two versions of the SCAT were used for the present study. The non-competitive group were given the original SCAT. For the moderately and highly competitive groups, the words 'play hockey' were substituted for 'compete'. This was done in order to investigate how these women feel specifically about their competitive involvement in hockey.

The SCAT is given to subjects disguised as the "Illinois Competition Questionnaire" as recommended by Martens (1977). This is done to alleviate problems of response bias due to negative perceptions associated with the word 'anxiety'.

Please refer to Appendices B and C for copies of the original and modified SCAT respectively.

3.2.3 Women's Roles and Sports

This is a fourteen item questionnaire developed by myself and my supervisor to assess possible sources of anxiety that women feel in relation to participation in sport. The items are in the form of statements to which subjects "strongly agree", "agree", "disagree", or "strongly disagree". Please refer to Appendix D for a copy of the questionnaire.

The items are based on the literature pertaining to women in sport, in particular sport and sex role socialisation literature. They investigate how women perceive their involvement in sport in relation to traditional notions of women's roles and sport. Specifically, the questionnaire investigates whether women feel that their participation in sport contravenes our society's perception of desirable behaviour for women.

The questionnaire examines six areas relating to women's involvement in sport.

1. Feelings about Femininity and Sport

Questions 1 "Participation in sport enhances my feelings about being a woman" and 13 "Sports participation makes me feel good about myself as a woman", assess the extent to which sports participation influences a woman's feelings of femininity.

2. Role conflict: Being a Woman V Being a Sports Participant

Role conflict is measured by questions 5 "My role as a sportswoman conflicts with my other roles such as mother, &/or partner, &/or close friend", 12 "The important people in my life are supportive of my sports participation", and 14 "Sports participation for women conflicts with our society's ideals of femininity".

The questions from both of these sections are based on the literature relating to how women perceive discrepancies between socially approved women's roles, and sportspeople's roles. There has been a great deal of research to support the notion that a substantial proportion of women involved in sport perceive and experience this conflict (eg. Zoble, 1972; Sage and Loudermilk, 1979; Harris, 1979; Anthrop and Allison, 1983).

3. What Men Think

Questions 3 "Men find a woman who participates in sport less attractive than one who doesn't", and 7 "Men are put off by my image as a sportswoman" assess subjects' perceptions of how men feel about women who are involved in sport.

To date research in this area has taken the form of investigating men's attitudes towards sportswomen (eg. Harres, 1968; DeBacy et al., 1970; Selby and Lewko, 1976). However I wished to examine how women themselves feel that their sports participation is viewed by men.

4. Self-Esteem

It has been hypothesised that if women feel that their participation in sport conflicts with ideals of femininity, sport participation may have an adverse effect on self-esteem, since it may be an anxiety-provoking experience (Hall et al., 1986). However Hall et al. found that sport participation was associated

with self-esteem, as did Kukla and Pargman (1976); Oglesby (1978); and Del Ray and Sheppard (1981).

Items 4 "Sports participation makes me feel good about myself as a person" and 10 "Competing in sport makes me less attractive" were included to assess how participation in sport influences how the women feel about themselves.

5. The Importance of Sport in My Life

The importance of sport was assessed by questions 2 "When I participate in sport I take it seriously", 8 "Success in sport is very important in order for me to feel good about myself" and 9 "I worry that time spent on sport would be better spent on other things".

These items were included to investigate how seriously the women take their sport, since it has been proposed that in order for women to rationalise conflicts concerning sport and femininity, an 'apologetic' exists, whereby they compensate for their participation by taking their sport less seriously and not attaching a great deal of importance to it (Felshin, 1974).

6. The Importance of Women's Sport (Compared to Men's)

Questions 6 "Media coverage of women's sports is inadequate", and 11 "I prefer watching men's sports to watching women's sports" sought to compare perceptions of the relative importance of women's and men's sports.

Again, the inclusion of these questions was based on Felshin's theory of the 'apologetic' which proposes that women do not view their sport as being as consequential as men's (Felshin, 1974).

Scoring

Each question was scored separately since it was decided that question by question analysis would be the most meaningful way to examine perceptions about women's roles and sports. Please refer to Appendix E for scores attached to "strongly agree", "agree", "disagree" and "strongly disagree" for each of the questions.

3.3 Procedure

All subjects were given a questionnaire booklet containing copies of the Bem Sex Role Inventory, Illinois Competition Questionnaire, and the Women's Roles and Sports questionnaires. Each booklet was headed by a cover sheet, (see Appendix F), which introduced the study and asked for details concerning age, occupation, sporting involvement, level of education, height, weight, marital status and sexual preference.

All subjects were told: "I am doing a general study about women and sport, and I am interested in finding out about feelings that women have about competing in sport". In addition the hockey players were told, "in particular about how you feel about competing in hockey". All subjects were then told: "The questionnaire is anonymous and should take about fifteen minutes to complete". All except the non-competitive psychology students were told to complete the questionnaire in their own time.

The subjects in the highly competitive group were given their questionnaires one Saturday after playing for their regular women's premier competition teams. The women were spoken to in two groups. They all agreed to participate in the study and were told to return their questionnaires the next weekend, when they would all be meeting for a hockey coaching clinic. Those who forgot to bring their questionnaires were informed that they could return them by post. Of the twenty-four questionnaires distributed, fifteen were returned (62.5% response rate).

After gaining consent, names and telephone numbers from the coaches, each player from the Carlton and Selwyn women's senior reserve teams was telephoned. After introducing myself and the study, each player was told the same as what the Canterbury women had been told. All of the women agreed to complete the questionnaires, so their addresses were obtained and they were sent a questionnaire and a self-addressed and stamped envelope for them to return the questionnaires. Of the twenty-three women to whom questionnaires were sent, sixteen responded (69.5% response rate).

Eleven of the subjects forming the non-competitive group were spoken to and given questionnaires to complete at the beginning of a psychology laboratory class.

The remaining seven clerical non-competitive subjects were given their questionnaires, as well as a copy of what had been said to the other groups, through a contact.

The non-competitive subjects were all instructed to answer the questionnaire "according to how you have ever felt or feel when competing in sports and games".

All women approached for the non-competitive group completed the questionnaires.

All subjects were sent a summary of results of the study.

CHAPTER 4

RESULTS

4.1 Design

To examine the relationship between sex role and sport participation group three separate chi square analyses were calculated manually. The analyses compared the proportion of women assigned to each sex role category for the moderately and highly competitive, moderately and non-competitive, and the highly and non-competitive sports participation groups. These separate analyses were used in order to detect exactly where the intergroup sex role differences lay.

An analysis of variance (ANOVA) was computed using a 2-factor 3 (sex role) by 3 (sport participation group) design, with the SCAT score as the dependent variable.

Fourteen ANOVAs utilising the same design and independent variables were calculated to compare scores for the individual Women's Roles and Sports questions. All of the ANOVAs were computed using the Apple Macintosh CLR-ANOVA statistical package.

Post hoc t-tests were manually calculated on those variables shown to be statistically significant. This provided further analysis to determine the specific location of the significant group differences.

Correlation coefficients were calculated using the Apple Macintosh Statview correlation facility, to compare sport competition anxiety with scores on twelve of the fourteen items on the Women's Roles and Sports questionnaire. The two items for which correlations were not computed, were items 6 and 11. It was felt that it would be meaningless to relate these variables to sport competition anxiety.

4.2 Sex Role and Sport Participation Group

Scores obtained on the Bem Sex Role Inventory were used to categorise subjects according to sex role orientation. Table 1 illustrates the numbers and

percentages of subjects in each of the sport participation groups classified as having a feminine, androgynous or masculine sex role.

Table 1. Numbers and percentages of subjects in each BSRI category for the three sport participation groups.

	Sport Participation Group		
Sex Role	Non-competitive	Moderately Competitive	Highly Competitive
Feminine	9 (50%)	4 (25%)	1 (6%)
Androgynous	7 (39%)	5 (31%)	7 (47%)
Masculine	2 (11%)	7 (44%)	7 (47%)

Three separate chi square analyses were calculated on the above data.

No differences in sex role orientation were found between the moderately and highly competitive groups (X^2 (2) = 2.273, $p > .05$), or the moderately and non-competitive groups (X^2 (2) = 4.969, $p > .05$). However the proportion of masculine and feminine subjects differed significantly for the highly competitive and the non-competitive sport participation groups (X^2 (2) = 10.018, $p < .01$). The highly competitive group had significantly more masculine subjects and significantly fewer feminine subjects than the non-competitive group.

4.3 Sport Competition Anxiety Test Scores

Sport competition anxiety scores were obtained using the SCAT. Subjects' scores ranged from 10 to 30. The mean score for the total subject population (N = 49) is 19.88, (SD = 4.66). Table 2. illustrates the frequency distribution of SCAT scores.

Table 2. Frequency distribution of SCAT scores.

Score:	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Freq.:	1	0	1	2	1	4	0	6	6	3	7	4	2	1	3	0	1	4	0	2	1

SCAT scores were analysed in a 2-factor 3 (sex role) by 3 (sport group) ANOVA design. Please refer to Appendix G for the summary table of means and the ANOVA summary table for the SCAT data.

A significant main effect was found for sport participation group $F(2,40) = 4.264$, $p < .05$. Post hoc t-comparisons of the group means revealed that the non-competitive group had significantly higher trait anxiety for sport competition ($M = 23.17$) than the highly competitive sport group ($M = 17.07$), $t(31) = 4.38$, $p < .01$. The main effect for sex role was not significant $F(2,40) = .532$, N.S. The sex role by sport group interaction also failed to reach significance $F(4,40) = .290$, N.S.

4.4 Women's Roles and Sports Questionnaire

4.4.1 Feelings about Femininity and Sport

Feelings about femininity and sport were assessed by responses to questions 1 and 13. Table 5 illustrates the frequency distribution of responses to question 1.

Table 5. Frequency distribution of responses to Question 1: "Participation in sport enhances my feelings about being a woman."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency (N = 49)	2	18	22	7

Slightly more people either *disagreed* or *strongly disagreed* than *agreed*

or *strongly agreed* that sport enhances their feelings about being a woman.

A 3 (sex role) by 3 (sport group) ANOVA yielded non significant main effects for sex role, F (2,40) = 1.186, N.S; and sport group, F (2, 40) = .779, N.S. The sex role by sport group interaction was also not significant F (4,40) = 1.552, N.S.

Table 6 illustrates the frequency distribution of responses to question 13.

Table 6. Frequency distribution of responses to Question 13: "Sports participation makes me feel good about myself as a woman"

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency (N = 49)	11	25	9	4

For question 13, significantly more subjects *strongly agreed* or *agreed* that sports participation makes them feel good about themselves as women.

A 3 x 3 ANOVA yielded non-significant main effects for sex role F (2,40) = .680, N.S. and sport group, F (2,40) = 2.084, N.S. The sex role x sport group interaction was not significant, F (4,40) = .699, N.S.

4.4.2 Role Conflict: Being a Woman V being a Sports Participant

Questions 5, 12 and 14 were used to assess subjects' feelings of role conflict in relation to sport.

Table 7 illustrates the frequency distribution of subjects' responses to question 5.

Table 7. Frequency distribution of responses to question 5: "My role as a sportswoman conflicts with my other roles such as mother &/or partner &/or close friend."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency				
(N = 49)	1	6	25	17

Almost every subject *disagreed* or *strongly disagreed* that her role as a sportswoman conflicts with other roles she occupies.

A 3 x 3 ANOVA was non-significant with regard to the main effect of sex role, F (2,40) = .944, N.S, and sport group, F (2,40) = .013, N.S. The interaction effect for sex role x sport group was also not significant, F (4,40) = .109, N.S.

Responses to question 12 are shown in Table 8.

Table 8. Frequency distribution of responses to Question 12: "The important people in my life are supportive of my sports participation."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	1	2	3	4
Frequency				
(N = 48*)	20	24	4	0

* N.B. One subject did not answer question 12.

Nearly all subjects *agreed* or *strongly agreed* that important people in their lives support their participation in sport.

A 3 x 3 ANOVA was not significant for the main effect of sex role, F (2,39) = .870, N.S. The main effect for sport group was significant, F (2,39)

= 4.169, $p < .05$. Post hoc t-comparisons established that subjects in the non-competitive group scored significantly higher (M = 2.11) than both the moderately competitive (M = 1.56), t (31) = 2.75, $p < .01$, and the highly competitive (M = 1.27), t (30) = 4.29, $p < .001$ groups. More subjects in the highly competitive and moderately competitive groups indicated that they *strongly agree* that they receive support for their sports participation. More subjects in the non-competitive group *agree* that they receive support.

The sex role x sport group interaction effect was not significant, F (4,39) = 1.585, N.S.

Please refer to Appendix H for the summary table of means and the ANOVA summary table for the Question 12 data.

Table 11 illustrates the frequency distribution of subjects' responses to question 14.

Table 11. Frequency distribution of responses to Question 14: "Sports participation for women conflicts with our society's ideals of femininity."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency (N = 49)	1	10	23	15

Most subjects *disagreed* or *strongly disagreed* that sports participation for women conflicts with our society's ideals of femininity, however nearly one quarter of the subjects did *agree* with the statement.

A 3 x 3 ANOVA was non-significant for the main effects of sex role, F (2,40) = .096, N.S., and sport group, F (2,40) = .772, N.S. The sex role x sport group interaction effect also did not reach significance, F (4,40) = .331, N.S.

4.4.3 What Men Think

Questions 3 and 7 assessed subjects' perceptions of men's attitudes towards women sports participants.

Table 12 illustrates the frequency distribution of subjects' responses to question 3.

Table 12. Frequency distribution of responses to Question 3: "Men find a woman who participates in sport less attractive than one who doesn't."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	1	2	3	4
Frequency				
(N = 49)	0	0	29	20

All subjects either *disagreed* or *strongly disagreed* that men find sportswomen less attractive than non-sportswomen.

A 3 x 3 ANOVA was not significant with regard to both the main effect of sex role, F (2,40) = .097, N.S and sport group, F (2,40) = .046, N.S. The interaction effect for sex role x sport group was not significant, F (4,40) = 1.640, N.S.

The frequency distribution of responses to question 7 is reported in Table 13.

Table 13. Frequency distribution of responses to Question 7: "Men are put off by my image as a sportswoman."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	1	2	3	4
Frequency				
(N = 48*)	1	2	30	15

* N.B. One subject wrote "not applicable" for Question 7.

Almost every subject *disagreed* or *strongly disagreed* that men are put off by her image as a sportswoman.

A 3 x 3 ANOVA was not significant for the main effects for sex role, F (2,39) = .206, N.S, and sport group, F (2,39) = .702, N.S. The sex role x sport group interaction was not significant, F (4,39) = 1.877, N.S.

4.4.4 Self-esteem

Questions 4 and 10 were used to assess whether the subjects felt that sport enhances their self-esteem.

Table 14 shows the frequency distribution of subjects' responses to question 4.

Table 14. Frequency distribution of responses to Question 4: "Sports participation makes me feel good about myself as a person."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency (N = 48*)	29	16	3	0

* N.B. One subject did not answer Question 4.

The majority of subjects *strongly agreed*, and many *agreed* that sports participation makes them feel good about themselves.

A 3 x 3 ANOVA did not yield a significant main effect for sex role, F (2,39) = .195, N.S or sport group, F (2,39) = 1.273, N.S. The interaction effect for sex role x sport group was not significant, F (4,39) = 1.900, N.S.

Table 15 shows the frequency distribution of subjects' responses to question 10.

Table 15. Frequency distribution of responses to Question 10: "Competing in sport makes me less attractive."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	1	2	3	4
Frequency (N = 48*)	0	0	17	31

* N.B. One subject did not answer Question 10.

The majority of subjects *strongly disagreed*, and many *disagreed* that competing in sport makes them less attractive.

A 3 x 3 ANOVA was not significant for the main effects of sex role, F (2,39) = 1.879, N.S, or sport group, F (2,39) = .045, N.S. The interaction effect for sex role and sport group was also not significant, F (4,39) = 1.701, N.S.

4.4.5 The Importance of Sport in My Life

Questions 2, 8 and 9 were used to assess subjects' feelings of how important sport is to them.

The frequency distribution of responses to question 2 is shown in Table 16.

Table 16. Frequency distribution of responses to Question 2: "When I participate in sport I take it seriously."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency (N = 48*)	21	22	3	2

* N.B. One subject did not answer Question 2.

Almost all subjects *strongly agreed* or *agreed* that they take participation in sport seriously.

A 3 x 3 ANOVA was not significant with respect to the main effects for sex role, F (2,39) = 1.079, N.S., or sport group, F (2, 39) = 1.542, N.S. The interaction effect for sex role x sport group was not significant, F (4,39) = .254, N.S.

Table 17 shows the frequency distribution of responses to question 8.

Table 17. Frequency distribution of responses to Question 8: "Success in sport is very important in order for me to feel good about myself."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency (N = 49)	10	18	18	3

The responses to question 8 were somewhat more divided than the responses to other questions. Slightly more people either *strongly agreed* or *agreed* that success in sport is very important in making them feel good about themselves. However quite a substantial proportion of subjects *disagreed* with this statement.

A 3 x 3 ANOVA was not significant for the main effects of sex role, F (2,40) = 2.099, N.S., or sport group, F (2,40) = .717, N.S. The sex role x sport group interaction effect was also not significant, F (4,40) = .735, N.S.

Table 18 shows the frequency distribution of subjects' responses to question 9.

Table 18. Frequency distribution of responses to Question 9: "I worry that time spent on sport would be better spent on other things."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	1	2	3	4
Frequency (N = 49)	1	2	27	19

Almost all subjects *disagreed* or *strongly disagreed* that they worry about the time that they spend on sport.

A 3 x 3 ANOVA was not significant for the main effects of sex role, F (2,40) = 1.983, N.S., or sport group, F (2,40) = 1.983, N.S. The sex role x sport group interaction effect was not significant, F (4,40) = .343, N.S.

4.4.6 The Importance of Women's Sport, (Compared to Men's)

Questions 6 and 11 assessed subjects' opinions as to the relative importance of women's and men's sports.

Table 19 shows the frequency distribution of subjects' responses to question 6.

Table 19. Frequency distribution of responses to Question 6: "Media coverage of women's sports is inadequate."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	4	3	2	1
Frequency (N = 49)	32	13	4	0

The majority of the women *strongly agreed* that coverage of women's sport by the media is inadequate.

A 3 x 3 ANOVA was not significant for the main effect of sex role, F (2,40) = .096, N.S. The main effect for sport group was significant, F (2,40) = 4.432, $p < .05$. Post hoc t-comparisons indicated that the highly competitive group scored significantly higher (M = 4.00) than the non-competitive group (M = 3.28), t (31) = $p < .001$. Please refer to Appendix I for the summary table of means and the ANOVA summary table for question 6. The sex role x sport group interaction effect was not significant, F (4,40) = .270, N.S.

Table 22 illustrates the frequency distribution of responses to question 11.

Table 22. Frequency distribution of responses to Question 11: "I prefer watching men's sports to watching women's sports."

Response	Strongly agree	Agree	Disagree	Strongly disagree
Score	1	2	3	4
Frequency (N = 49)	1	18	20	10

More people either *disagreed* or *strongly disagreed* than *agreed* that they prefer watching men's to watching women's sports. However a significant proportion did *agree* that they prefer watching men's sports.

A 3 x 3 ANOVA was not significant with respect to the main effect for sex role, F (2,40) = .267, N.S. The main effect for sport group was significant, F (2,40) = 3.325, $p < .05$. Post hoc t-comparisons determined that the highly competitive group scored significantly higher (M = 3.33) than the non-competitive group (M = 2.56), t (31) = 2.75, $p < .05$. Please refer to Appendix J for the summary table of means and the ANOVA summary table for question 11 scores. The sex role x sport group interaction was not significant, F (4,40) = 1.250, N.S.

4.5 Sport Competition Anxiety and Women's Roles and Sports

Every subject's SCAT score was correlated with her score on questions 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13 and 14 on the Women's Roles and Sports

questionnaire.

Table 25 shows the correlations for SCAT and Women's Roles and Sports questions.

Table 25. Correlations of SCAT scores with scores on questions 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13 and 14 of the Women's Roles and Sports Questionnaire.

Question	N	Correlation	Significance
1	49	-.1	N.S.
13	49	-.202	N.S.
5	49	.067	N.S.
12	48*	.388	$p < .01$
14	49	.119	N.S.
3	49	.112	N.S.
7	48*	-.161	N.S.
4	48*	-.122	N.S.
10	48*	-.147	N.S.
2	48*	-.131	N.S.
8	49	-.159	N.S.
9	49	-.289	N.S

* One subject did not answer these questions on the Women's Roles and Sports questionnaire.

1. Sport Competition Anxiety and Feelings about Femininity and Sport

There was a very weak negative correlation between SCAT score and feelings about femininity and sport as measured by questions 1 and 13. These correlations were not significant.

2. Sport Competition Anxiety and Role Conflict

There were very weak non-significant positive correlations between SCAT score and responses to questions 5 and 14.

Scores on question 12 "The important people in my life are supportive of my sports participation", were significantly positively correlated with SCAT score ($r = .388$, $p < .01$). This correlation indicates that scoring highly on SCAT was associated with scoring highly on question 12.

That is, high sport competition anxiety is correlated with *disagreeing* or *agreeing* with question 12.

3. Sport Competition Anxiety and What Men Think

There was a very weak non-significant positive correlation between SCAT score and response to question 2. Question 7 was weakly negatively correlated with SCAT score. This correlation was not significant.

4. Sport Competition Anxiety and Self-esteem

Questions 4 and 10 were very weakly negatively correlated with SCAT score. These correlations were not significant.

5. Sport Competition Anxiety and the Importance of Sport in My Life

Questions 2 and 8 were weakly negatively correlated with SCAT score. These correlations were not significant. Question 9 "I worry that time spent on sport would be better spent on other things", was negatively correlated with SCAT score ($r = -.289$, N.S.) This correlation, which approached

significance, indicates that there is a tendency for those with high sport competition anxiety to either *strongly agree* or *agree* with question 9.

CHAPTER 5

DISCUSSION

5.1 Sex Role and Sport Participation Group

The proportions of feminine and masculine subjects were significantly different for the highly competitive and non-competitive groups.

Partial support was found for the hypothesis that the moderately competitive and non-competitive groups have higher proportions of feminine subjects than the highly competitive group. The non-competitive group had a significantly higher proportion of feminine subjects than the highly competitive group. This supports past findings (Colker and Widom, 1980; Colley, Roberts and Chipps, 1985). The moderately competitive group fell midway between these two groups, not significantly different from either.

The hypothesis that there are more masculine and androgynous subjects in the highly competitive group compared to the moderately competitive and non-competitive groups, was partially supported. There was a significantly higher proportion of masculine subjects in the highly competitive group relative to the non-competitive group. Again, the proportion of masculine subjects in the moderately competitive group was between these groups, but was not significantly different to either group.

There were no group differences in the proportions of androgynous subjects.

These findings support past research indicating that relatively high levels of masculinity are associated with highly competitive sports participation (Myers and Lips, 1978; Uguccioni and Ballantyne, 1980).

However, many of the past researchers, finding groups of highly competitive sportswomen to be predominantly androgynous, have concluded that although competitive sportswomen endorse high degrees of masculine traits, they also endorse feminine traits (Chalip, Villiger and Duignan, 1980; Colley, Roberts and Chipps, 1985). This was supported to a degree, but the extremely low proportion of feminine subjects in the highly competitive group,

and the non-significant group differences in androgyny, mitigate against concluding that this group was no less feminine than the other groups.

The finding that the moderately competitive group had proportions of masculine and feminine subjects falling between the highly competitive and non-competitive groups, not significantly different from either group, contradicts past research which has found moderately competitive groups to be less masculine and more feminine than highly competitive groups (Myers and Lips, 1978; Uggucioni and Ballantyne, 1980).

However the proportion of women of each sex role category in the moderately competitive group was relatively more evenly distributed than the other groups. This may account for the moderately competitive group's affiliation with both the highly competitive and the non-competitive groups. This finding suggests that sport of a moderately competitive nature may be enjoyed by women of all sex-role types.

5.2 Sport Competition Anxiety

The mean SCAT score for the total sample was 19.88 This is lower than Marten's (1977) female college age SCAT norms. It is also lower than mean female scores found in many other studies (eg. Segal and Weinberg, 1984; Wittig, 1984; Andersen and Williams, 1987). However these means were all based on student rather than sport samples, which may explain the differences in the results.

The hypothesis that females with a feminine sex role have the highest levels of sport competition anxiety, presumably because of conflicts about appropriate feminine roles, was not supported. No differences in SCAT scores were found between any of the sex role groups.

This result replicates findings by Owie (1981); Wittig (1984) and Segal and Weinberg (1987). However it contradicts the more recent findings of Wittig, Duncan and Schurr (1987) and Andersen and Williams (1987), which have found feminine females to be significantly higher in sport anxiety than women of all other sex roles.

The lack of differences in sport competition anxiety according to sex role may be due to the fact that in New Zealand, sport plays an integral part in

the lives of most people. Because sport participation for women is the norm rather than the exception, sport may not be perceived as conflicting with femininity and expected roles for women.

Significant differences in sport anxiety were found between the three sports participation groups. The highly competitive women were significantly lower in sport competition anxiety than the non-competitive women. The anxiety levels of the moderately competitive group members were between the other two groups, and were not significantly different from either group.

This result concurs with Smith (1983) who found that children who were rated as "all-star" players had significantly lower sport anxiety than children rated as "playing substitute". However the present study involved completely unrelated groups, whereas Smith's comparisons were made between members playing in the same team.

Differences in sport anxiety between the highly competitive and non-competitive groups may be attributed to differences in perceptions of the competitive sport experience. The highly competitive hockey players may have lower levels of anxiety about playing sport because they are highly skilled, and rather than being a fear and anxiety provoking experience, competitive sports participation may reinforce feelings of mastery and competence.

In New Zealand, since sporting prowess is particularly highly regarded, the non-competitive women may feel anxious about competing in sport because they feel inadequate and inept. This may in fact be a powerful determinant of their non-participation, since the competitive situation may only serve to make them feel more incompetent.

5.3 Women's Roles and Sports

Most of the women in the study felt that sport participation does not enhance feelings about being a woman. This finding supports previous research which has suggested that sport is perceived as conflicting with femininity (eg. Harris, 1979).

However, most of the women indicated that they feel that sports participation makes them feel good about themselves as women. This seems to contradict findings that participation in sport does not enhance feelings about

being a woman. It may be that regardless of the fact that participation in sport does not enhance femininity, nonetheless sport makes the women feel good about themselves. The women may have equated feeling good about themselves "as women" with feeling good about themselves per se. If this is the case, then perhaps this question did not adequately tap perceptions about femininity and sport, but rather, it was assessing self-esteem. There were no differences in responses to the femininity questions according to sex role or sport group.

Only very few of the women responded that they feel that their roles as sportswomen conflict with other roles they occupy. Similarly, most of the women felt that sports participation for women does not conflict with our society's ideals of femininity. However nearly one quarter of the women indicated that they believe sport participation for women contravenes our society's feminine ideals. There were no differences in opinions according to sex role or sport competition group.

These findings run totally counter to American suggestions that women feel conflicts about sport because they believe that their participation in sport goes against society's ideas of femininity, and clashes with other roles they occupy (Harris, 1975; 1979; Felshin, 1976; Hart, 1976; Del Ray, 1978).

The present research suggests lower levels of role conflict than found by Sage and Loudermilk (1979) and Anthrop and Allison (1983).

Additionally, all exept four of the women responded that they receive support for their participation in sport from people who are important in their lives. There were no differences in responses for the sex role groups, however more women in the highly competitive group *strongly agreed* that they receive support, whilst the non-competitive subjects *agreed* that they receive support from people who are important to them.

This suggests that the women who become involved in competitive sport are those who receive considerable support for their sport participation. Alternatively, it may be that they receive greater support because they have achieved success in their sport.

The women almost unanimously indicated they feel that men do not perceive them negatively because of their sporting involvement. None of the

women considered that men find sportswomen less attractive than non-sportswomen. Further, all except three of the women felt that men are not put off by their image as a sportswoman. One subject even responded that whether men are put off by her image as a sportswoman, was not applicable for her. There were no differences in responses across sex role and sport participation groups.

This finding may be interpreted as possibly contrasting with research by Snyder and Kivlin (1975) and Fisher et al. (1977; cited in Anthrop and Allison, 1983), who found that sportswomen perceived that a negative stigma is attached to them because of their participation in sport.

All except three of the women responded that sports participation makes them feel good about themselves "as a person". None of the women responded that sports participation makes them less attractive. Again, there were no differences in responses according to sex role or sport participation group.

Taken together, these findings seem to indicate that sports participation enhances the self-esteem of women. This endorses findings of Snyder and Kivlin (1975); Snyder and Spreitzer (1976); Kukla and Pargman (1976) and Del Ray and Sheppard (1981).

In an attempt to investigate the extent to which New Zealand women express "apologetic" behaviour in relation to sport, the importance of sport in the lives of the women was assessed. This follows the theoretical proposition by Felshin (1976), that in order to reduce role conflicts about sport and femininity, women, in particular those involved in competitive sports, will attempt to emphasise femininity. She suggests that one way in which women emphasise femininity in sport, is to not take sport seriously, and to view women's sport as being not as consequential as men's.

All except five of the women responded that they take sports participation seriously. Further to this, over half of the women indicated that success in sport is very important in order to make them feel good about themselves. All but three of the women responded that they do not worry that time taken up with sport would be better spent doing something else.

As well as there being no differences in these responses according to sex role, interestingly, there were no differences for the sport participation

groups. This means that all of the groups held similar views as to the importance of sport to them.

These findings provide no support for Felshin's apologetic theory, since sport participation of some kind is seen as important by almost all of the women.

All except four of the women indicated that they believe media coverage of women's sport is inadequate. Although there were no differences in responses according to sex role, the main effect for sport group was significant. The highly competitive group unanimously *strongly agreed* that media coverage of women's sport is inadequate, while the non-competitive group *agreed.*

Most of the women indicated that they do not prefer watching men's sport to watching women's sport. Again differences in response were found for sport participation group but not sex role group. The highly competitive group more *strongly disagreed* that they prefer watching men's sport to women's, whereas the responses for the non-competitive group were more heterogeneous, with some of the women *agreeing* and some *disagreeing* that they prefer watching men's sport.

The group differences suggest that the highly competitive sportswomen are more committed to women's sport, and feel more strongly that women's sports are as significant as men's, and are as worthy of media attention.

The findings suggest that Felshin's apologetic theory does not hold for New Zealand sportswomen. Moreover, it is precisely those women who are involved in sport at the highly competitive level who affirm the importance of women's sport.

5.4 Women's Roles and Sports and Sport Competition Anxiety

The hypothesis that sport competition anxiety is associated with the perception that sport participation does not enhance femininity was not supported. Sport competition anxiety was not found to be correlated with feelings about femininity and sport.

Similarly, the hypothesis that sport competition anxiety is associated with feelings of role conflict found only marginal support. High levels of sport

anxiety were correlated with *disagreeing* or *agreeing*, rather than *strongly agreeing* that the important people in one's life are supportive of their sport participation. Anxiety about sport was associated with a perceived relative lack of support from people who are important in one's life.

Sport competition anxiety was not found to be correlated with perceptions about what men think about women's participation in sport. This finding provides a lack of support for the hypothesis that sport competition anxiety is associated with feelings that men disapprove of and are put off by women's sport participation.

The hypothesis that sport competition anxiety is associated with the belief that sport participation does not enhance self-esteem was not supported. Self-esteem was not found to be related to anxiety about competing in sport.

Sport competition anxiety was not found to be related to the importance of sport in a person's life. However, there was a tendency for those women who worry that time spent on sport would be better spent on other things to have high anxiety about sport competition.

The results from the Women's Roles and Sports questions suggest that anxieties women feel about competitive sport can not be explained in terms of conflicts concerning femininity and roles, or perceptions that men have negative attitudes towards sportswomen, negative effects on self-esteem, or the importance that one attaches to sport.

This may be due to the fact that the SCAT instrument may be measuring anxiety that is specific to the competitive sporting event itself. Rather than reflecting attitudes that women have about the sport experience, the SCAT may merely be tapping pregame nervousness and apprehension about the sport episode.

5.5 Critique and Suggestions for Future Research

The findings from the present study must be interpreted tentatively because of possible limitations of the questionnaires and statistics employed.

Firstly, the interpretation of the BSRI findings must be cautious because of the unknown validity of the instrument in the New Zealand context.

Sex role classification according to the BSRI is based on the extent to which an individual endorses American college students' ratings of traits which are stereotyped as being desirable for males and females. It is not known whether these behavioural and personality traits are stereotypically desirable for males and females in New Zealand culture, to the same extent as in American culture.

Secondly, it has been suggested that rather than interpreting differences in personality traits as measured by the BSRI, relative to gender, it may be more meaningful to interpret these differences in terms of the extent to which a person endorses instrumental or expressive characteristics (Helmreich, Spence and Halohan, 1979).

Thus, the women in the highly competitive group can be seen as more instrumental, and the women in the non-competitive more expressive in personality.

Because of the problems associated with the t-ratio method for scoring the inventory, future research may be better employing subjects classified by both the t-ratio and the median-split techniques. This would mean that greater subject numbers would be needed.

Andersen and Williams (1987), however have questioned the importance of gender role in predicting and explaining sport behaviours and attitudes, since many studies have found little or no differences between sex role groups. In the present study too, no differences were found in responses to the SCAT or any of the Women's Roles and Sports questions.

The small size of the present samples may have had an effect on the results of the statistical analyses. When broken down into sport participation group and sex role group, small, uneven, cell sizes may have affected the results of the analyses of variance. This may have led to a higher incidence of Type-1 errors. That is, there may have been a greater chance that the null hypotheses were falsely rejected and the research hypotheses accepted. Future research may benefit from comparing the responses of larger, more evenly distributed groups.

Some of the Women's Roles and Sports questions may have been

unclear, and consequently may not have been measuring what they purported to measure. For instance, question 13 "Sports participation makes me feel good about myself as a woman", was intended to assess whether women feel that sports participation enhances or detracts from their femininity. However, the responses to this question contradict the responses to question 1 "Participation in sport enhances my feelings about being a woman", which was intended to assess the same thing.

For some of the questions, the entire range of responses was not represented. For example, for question 10 "Competing in sport makes me less attractive", all subjects responded either *disagree* or *strongly disagree.* Consequently the obtained correlation coefficients for questions such as this were based on comparisons of the subjects' responses to only half of the possible response options. Therefore the correlations between SCAT score and responses to some of the Women's Roles and Sports questions must be interpreted very cautiously.

The highly favourable responses by the women may have been to an extent due to attempts to justify their commitment to sport. The women may therefore have responded to the questions in such a way as to over-emphasise the positive aspects of sport participation. The responses may also have been influenced by social desirability. This may be particularly true of the questions asking the women to comment on their attractiveness, for example question 3 "Men find a woman who participates in sport less attractive than one who doesn't". Future studies may benefit from the inclusion of a measure of social desirability.

It may be of value to use open-ended questions to assess why women feel anxious about sport. Also, since there were significant differences in sport competition anxiety between the highly competitive and non-competitive groups, it may be worthwhile to investigate reasons why some women do not participate in competitive sport.

To explore sport anxiety among women of different competitive levels, it would have perhaps been better to use for the "control" group, women who are not involved in sport of any kind. However, in reality it proved extremely difficult to find women to fit this category.

Perhaps more differences in responses to the Women's Roles and

Sports questions may have been found for the sport groups if the questions were worded using "competitive sport participation" rather than "sport participation". This may also have strengthened the relationship between these questions and the SCAT scores.

5.6 Conclusions

The endorsement of instrumental traits among the highly competitive sportswomen and expressive traits among the non-competitive women suggests that instrumental traits are important for, and may be reinforced by participation in competitive sport. Competitive sports may therefore attract women possessing instrumental traits.

The endorsement of instrumental, (masculine), or expressive, (feminine) traits had no bearing on competitive sport anxiety.

Sport competition anxiety levels were different according to sport participation group. Lack of experience and confidence in one's own sporting ability may be the reason why the non-competitive women were significantly higher in competitive sport anxiety than the highly competitive women.

Sport anxiety was not associated with questions assessing feelings about women's roles and sports. The responses also indicated that most of the women view their sport participation positively.

The highly competitive women held stronger views regarding the relative importance of women's and men's sports, and their attention by the media. This group also indicated that they receive more support from others for their participation in competitive sport.

A substantial proportion of the women indicated that although they do not believe that participation in sport enhances feelings of femininity, sport is a positive and beneficial experience for them. The findings from this study also suggest that New Zealand women are more comfortable about their involvement in sport than American women. This may be because sport participation for both women and men is extremely prevalent, and has always been ingrained in our culture. Sports such as hockey, although perhaps perceived as inappropriate for women in the United States, have always been relatively acceptable in New Zealand. However, more research is needed to investigate

why women of differing levels of sporting involvement experience sport competition anxiety.

Attitudes about women in sport are changing as increasing numbers of women in New Zealand and other countries are turning to sport, challenging the past notion that competitive sport participation is inappropriate and unacceptable for women. The past fears that sport participation by women will lead to fundamental changes in the definitions of masculinity and femininity, are to an extent being realised as these definitions are becoming broader. This is because activities and behaviours that were previously confined to members of one sex are becoming acceptable for members of the other. Proponents of the androgyny theories, such as Bem (1977), Oglesby (1978) and Helmreich et al. (1979) argue that this behavioural flexibility greatly benefits both sexes by giving people the freedom to choose from a wider range of behaviours.

However, although it seems that many of the attitudes about sportswomen are changing, and greater numbers of women are enjoying the benefits of sport, it is difficult to ascertain the extent of these changes. Because of the lack of past literature and research pertaining to women and sport in New Zealand, there is nothing with which to compare the present findings.

On talking to many men and women about women's sport participation, it is also obvious that women's competitive sport participation is still negatively stereotyped by many. Sport is still viewed by a great number of women to be male dominated. Because of these factors, many women may be dissuaded from taking up sport, thereby perpetuating male domination of sport.

The findings from the present study however, suggest that women who do participate in sport derive the same physical and psychological benefits from sport participation as men.

Women no longer need be content with a passive and supportive role in sports. Greater numbers of sports are being pursued by women, and sports-women are gaining an increasingly higher and more positive profile.

Media coverage of women's sport provides an indication of the position of women's sport within New Zealand culture. Coverage of women's sports, although increasing in frequency and quality, is still not equal to that of men's sports. More television time and newspaper space is still devoted to men's

sports than to women's. This has always been justified in terms of the relative popularity of and interest in men's sports (Robyns, 1989). However, as more women are becoming involved in sport, and as the standard of women's sport is improving, it is becoming increasingly necessary to devote more media attention to women's sport. Until this happens women's sport will continue to be viewed as secondary to men's.

REFERENCES

Anderson, M.B., and Williams, J.M. (1987). Gender Role and Sport Competition Anxiety: A Re-examination. Research Quarterly for Exercise and Sport, 58(1), 52-56.

Anthrop, J., and Allison, M.T. (1983). Role conflict and the high school female athlete. Research Quarterly for Exercise and Sport, 54(2), 104-111.

de Beauvoir, S. (1969). The Second Sex. (Vol. 2) London: New English Library.

Bem, S.L. (1974). The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 42(2), 155-162.

Bem, S.L. (1977). On the utility of alternative procedures for assessing psychological androgyny. Journal of Consulting and Clinical Psychology, 45(2), 196-205.

Bem, S.L. (1979). Theory and measurement of androgyny: A reply to the Pedhazur-Tetenbaum and Locksley-Colten critiques. Journal of Personality and Social Psychology, 37(6), 1047-1054.

Bem, S.L. (1981). Gender Schema Theory: A cognitive account of sex typing. Psychological Review, 88(4), 354-364.

Brand, H.J., Hanekom, J.D.M., and Scheepers, D. (1988). Internal consistency of the Sport Competition Anxiety Test. Perceptual and Motor Skills, 67, 441-442.

Chalip, L., Villiger, J., and Duignan, P. (1980). Sex-role identity in a select sample of women field hockey players. International Journal of Sport Psychology, 11, 240-248.

Cheatham, T., and Rosentsweig, J. (1982). Validation of the Sport Competition Anxiety Test. Perceptual and Motor Skills, 55, 1343-1346.

Colley, A.M. (1986). Sex roles in leisure and sport. In A.M. Colley and D.J. Hargreaves (Eds.), The Psychology of Sex Roles. London: Harper and Row.

Colley, A.M., Roberts, N., and Chipps, A. (1985). Sex-role identity, personality and participation in team and individual sports by males and females. International Journal of Sport Psychology, 16, 103-112.

Colker, R., and Widom, C.S. (1980). Correlates of female athletic participation: Masculinity, femininity, self-esteem, and attitudes towards women. Sex Roles, 6(1), 47-58.

Crawford, S.A.G.M. (1987). Pioneering women: Recreational and sporting opportunities in a remote colonial setting. In J.A. Mangan, and R.J. Park (Eds.), From Fair Sex to Feminism: Sport and the Socialization of Women in the Industrial and Post Industrial Eras. London: Frank Cass.

DeBacy, D.L., Spaeth, R., and Busch, R. (1970). What do men really think about athletic competition for women? Journal of Health, Physical Education and Recreation, 41, 28-29.

Del Ray, P. (1978). The apologetic and women in sport. In C.A. Oglesby (Ed.), Women and Sport: From Myth to Reality. Philadelphia: Lea and Feibiger.

Del Ray, P., and Sheppard, S. (1981). Relationship of psychological androgyny in female athletes to self-esteem. International Journal of Sport Psychology, 12, 165-175.

Edwards, S.W., Gordin, R.D., and Henschen, K.P. (1984). Sex-role orientations of female NCAA championship gymnasts. Perceptual and Motor Skills, 58, 625-626.

Felshin, J. (1976). The triple option for women in sport. In M.M. Hart (Ed.), Sport in The Sociocultural Process, 2nd ed. Dubuque, Iowa: William C. Brown Company Publishers.

Gerson, R., and Deshaies, P. (1978). Competitive trait anxiety and

performance as predictors of pre-competitive state anxiety. International Journal of Sport Psychology, 9(1), 16-26.

Gill, D.L. (1986). Psychological Dynamics of Sport. Champaign, Illinois: Human Kinetics Publishers Inc.

Hall, E.G., Durborow, B., and Progen, J.L. (1986). Self-esteem of female athletes relative to sex role type and sport type. Sex Roles, 15 (7/8), 379-390.

Harres, B. (1968). Attitudes of students toward women's athletic competition. The Research Quarterly, 39 (2), 278-284.

Harris, D.V., (1975). Research studies on the female athlete: Psychosocial considerations. Journal of Physical Education and Recreation, 46, 32-36.

Harris, D.V. (1979). Female sport today: Psychological considerations. International Journal of Sport Psychology, 10, 168-172.

Harris, D.V. (1981). Personality research: Implications for women in sport. In J. Borms, M. Hebbelinck, and A. Venerando (Eds.), The Female Athlete: A Socio-Psychological and Kinanthropometric Approach. Basel: Karger.

Hart, M.M. (1976). On being a female in sport. In M. Hart (Ed.), Sport in the Socio-cultural Process, 2nd ed. Dubuque, Iowa: William C. Brown Company Publishers.

Helmreich, R.L., Spence, J.T., and Halohan, C.K. (1979). Psychological androgyny and sex role flexibility: A test of two hypotheses. Journal of Personality and Social Psychology, 37(10), 1631-1644.

Kukla, K.J., and Pargman, D. (1976). Comparative perceptions of psychological well-being as influenced by sport experience in female athletes. The Research Quarterly, 47 (3), 375-380.

Locksley, A., and Colten, M.E. (1979). Psychological androgyny: A case of missing identity? Journal of Personality and Social Psychology,

37(6), 1017-1031.

Martens, R., and Gill, D.L. (1976). State anxiety among successful and unsuccessful competitors who differ in competitive trait anxiety. The Research Quarterly, 47(4), 698-708.

Martens, R., and Simon, J.A. (1976). Comparison of three predictors of state anxiety in competitive situations. The Research Quarterly, 47 (3), 381-387.

Martens, R. (1977). Sport Competition Anxiety Test. Champaign, Illinois: Human Kinetics Publishers.

McCrone, K.E. (1988). Sport and the Physical Emancipation of English Women 1870-1914. London: Routledge.

McKelvie, S.J., and Huband, D.E. (1980). Locus of control and anxiety in college athletes and non-athletes. Perceptual and Motor Skills, 50, 819-822.

Miller, B.P., and Miller, A.J. (1985). Psychological correlates of success in elite sportswomen. International Journal of Sport Psychology, 16, 289-295.

Mrozek, D.J. (1987). The Amazon and the American 'Lady': Sexual Fears of women as athletes. In J.A. Mangan, and R.J. Park (Eds.), From Fair Sex to Feminism: Sport and the Socialization of Women in the Industrial and Post Industrial Eras. London: Frank Cass.

Myers, A.M., and Lips, H.M. (1978). Participation in competitive amateur sports as a function of psychological androgyny. Sex Roles, 4 (4), 571-578.

Oglesby, C.A. (1978). The masculinity / femininity game: Called on account of... In C.A. Oglesby (Ed.), Women and Sport: From Myth to Reality. Philadelphia: Lea and Feibiger.

Owie, I. (1981). Influence of sex-role standards in sport competition anxiety. International Journal of Sport Psychology, 12, 289-292.

Pedhazur, E.J., and Tetenbaum, T.J. (1979). Bem Sex Role Inventory: A theoretical and methodological critique. Journal of Personality and Social Psychology, 37 (6), 996-1016.

Poteet, D., and Weinberg, R. (1980). Competition trait anxiety, state anxiety, and performance. Perceptual and Motor Skills, 50, 651-654.

Power, S.D. (1982). An analysis of anxiety levels in track and field athletes of varying ages and abilities. International Journal of Sport Psychology, 13, 258-267.

Robyns, S. (1989). Persuading women to think sport. The Dominion, Monday November 27, 1989, p. 13. Wellington.

Sage, G.H., and Loudermilk, S. (1979). The female athlete and role conflict. The Research Quarterly, 50(1), 88-96.

Sedney, M.A. (1981). Comments on median split procedures for scoring androgyny measures. Sex Roles, 7(2), 217-222.

Segal, J.D., and Weinberg, R.S. (1984). Sex, sex role orientation and competitive trait anxiety. Journal of Sport Behaviour, 7(4), 153-159.

Selby, R., and Lewko, J.H. (1976). Children's attitudes toward females in sports: Their relationship with sex, grade, and sports participation. The Research Quarterly, 47(3), 453-463.

Smith, T. (1983). Competition trait anxiety in youth sport: Differences according to age, sex, race and playing status. Perceptual and Motor Skills, 57, 1235-1238.

Smith-Rosenberg, C., and Rosenberg, C. (1987). The female animal: Medical and biological views of women and their role in nineteenth century America. In J.A. Mangan and R.J. Park (Eds.), From Fair Sex to Feminism: Sport and the Socialization of Women in the Industrial and Post Industrial Eras. London: Frank Cass.

Snyder, E.E., and Kivlin, J. (1975). Women athletes and aspects of psychological well-being and body image. Research Quarterly, 46(2), 191-199.

Snyder, E.E., and Spreitzer, E.A. (1976). Correlates of sport participation among adolescent girls. The Research Quarterly, 47(4), 804-809.

Spence, J.T., Helmreich, R., and Stapp, J. (1975). Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity and femininity. Journal of Personality and Social Psychology, 32(1), 29-39.

Spielberger, C.D. (1966). Theory and research on anxiety. In C.D. Spielberger (Ed.), Anxiety and Behaviour. New York: Academic Press.

Uggucioni, S.M., and Ballantyne, R.H. (1980). Comparison of attitudes and sex roles for female athletic participants and nonparticipants. International Journal of Sport Psychology, 11, 42-48.

Wark, K.A., and Wittig, A.F. (1979). Sex role and sport competition anxiety. Journal of Sport Psychology, 1(3), 248-250.

Williams, C.L., Lawrence, G., and Rowe, D. (1985). Women and Sport: A lost ideal. Women's Studies International Forum, 8(6), 639-645.

Wilmore, J.H. (1977). The female athlete. The Journal of School Health, 47, 227-233.

Wittig, A.F. (1984). Sport competition anxiety and sex role. Sex Roles, 10(5/6), 469-473.

Wittig, A.F., Duncan, S.L., and Schurr, K.T. (1987). The relationship of gender, gender-role endorsement and perceived physical self-efficacy to sport competition anxiety. Journal of Sport Behaviour, 10(4), 192-199.

Zoble, J. (1972). Femininity, achievement, and sports. In D.V. Harris (Ed.), Women and Sport: A National Research Conference. University Park, Pennsylvania: Penn State University.

APPENDIX A:

BEM SEX ROLE INVENTORY

Below are list of adjectives describing personality characteristics. On a scale ranging from 1 to 7, where 1 = " Never or almost never true", and 7 = "Always or almost always true", please indicate how well you feel that each adjective describes yourself by placing a number from 1 to 7 in the space provided.

Please respond to *all* of the adjectives according to how you feel about yourself. There are no correct or incorrect responses.

		Never/almost never true 1 2 3 4 5 6 7 Always/almost always true
1.	Self-reliant	_____
2.	Yielding	_____
3.	Helpful	_____
4.	Defends own beliefs	_____
5.	Cheerful	_____
6.	Moody	_____
7.	Independent	_____
8.	Shy	_____
9.	Conscientious	_____
10.	Athletic	_____
11.	Affectionate	_____
12.	Theatrical	_____
13.	Assertive	_____
14.	Flatterable	_____
15.	Happy	_____
16.	Strong Personality	_____
17.	Loyal	_____
18.	Unpredictable	_____
19.	Forceful	_____
20.	Feminine	_____
21.	Reliable	_____
22.	Analytic	_____
23.	Sympathetic	_____
24.	Jealous	_____
25.	Has leadership abilities	_____
26.	Sensitive to the needs of others	_____

		Never/almost never true	1	2	3	4	5	6	7	Always/almost always true
27.	Truthful									
28.	Willing to take risks									
29.	Understanding									
30.	Secretive									
31.	Makes decisions easily									
32.	Compassionate									
33.	Sincere									
34.	Self-sufficient									
35.	Eager to sooth hurt feelings									
36.	Conceited									
37.	Dominant									
38.	Soft spoken									
39.	Likable									
40.	Masculine									
41.	Warm									
42.	Solemn									
43.	Willing to take a stand									
44.	Tender									
45.	Friendly									
46.	Aggressive									
47.	Gullible									
48.	Inefficient									
49.	Acts as a leader									
50.	Childlike									
51.	Adaptable									
52.	Individualistic									
53.	Does not use harsh language									
54.	Unsystematic									
55.	Competitive									
56.	Loves children									
57.	Tactful									
58.	Ambitious									
59.	Gentle									
60.	Conventional									

APPENDIX B: SPORT COMPETITION ANXIETY TEST

Given to subjects as:

ILLINOIS COMPETITION QUESTIONNAIRE

DIRECTIONS:

Below are some statements about how persons feel when they compete in sports and games. Read each statement and decide if you HARDLY EVER, or SOMETIMES, or OFTEN feel this way when you compete in sports and games.

If your choice is HARDLY EVER, tick the square labelled A, if your choice is SOMETIMES, tick the square labelled B, and if your choice is OFTEN, tick the square labelled C.

There are no right or wrong answers. Do not spend too much time on any one statement. Remember to choose the word that describes how you usually feel when competing in sports and games.

		Hardly Ever	Sometimes	Often
1.	Competing against others is socially enjoyable.	A ❑	B ❑	C ❑
2.	Before I compete I feel uneasy.	A ❑	B ❑	C ❑
3.	Before I compete I worry about not performing well.	A ❑	B ❑	C ❑
4.	I am a good sportswoman when I compete.	A ❑	B ❑	C ❑
5.	When I compete I worry about making mistakes.	A ❑	B ❑	C ❑
6.	Before I compete I am calm.	A ❑	B ❑	C ❑
7.	Setting a goal is important when competing.	A ❑	B ❑	C ❑

8.	Before I compete I get a queasy feeling in my stomach.	A ❑	B ❑	C ❑
9.	Just before competing I notice that my heart beats faster than usual.	A ❑	B ❑	C ❑
10.	I like to compete in games that demand considerable physical energy.	A ❑	B ❑	C ❑
11.	Before I compete I feel relaxed.	A ❑	B ❑	C ❑
12.	Before I compete I'm nervous.	A ❑	B ❑	C ❑
13.	Team sports are more exciting than individual sports.	A ❑	B ❑	C ❑
14.	I get nervous waiting to compete.	A ❑	B ❑	C ❑
15.	Before I compete I usually get uptight.	A ❑	B ❑	C ❑

APPENDIX C: SPORT COMPETITION ANXIETY TEST

Given to subjects as:

ILLINOIS COMPETITION QUESTIONNAIRE

DIRECTIONS:

Below are some statements about how persons feel when they compete in hockey. Read each statement and decide if you HARDLY EVER, or SOMETIMES, or OFTEN feel this way when you play hockey.

If your choice is HARDLY EVER, tick the square labelled A, if your choice is SOMETIMES, tick the square labelled B, and if your choice is OFTEN, tick the square labelled C.

There are no right or wrong answers. Do not spend too much time on any one statement. Remember to choose the word that describes how you usually feel when playing hockey.

		Hardly Ever	Sometimes	Often
1.	Playing hockey against others is socially enjoyable.	A ❑	B ❑	C ❑
2.	Before I play hockey I feel uneasy.	A ❑	B ❑	C ❑
3.	Before I play hockey I worry about not performing well.	A ❑	B ❑	C ❑
4.	I am a good sportswoman when I play hockey.	A ❑	B ❑	C ❑
5.	When I play hockey I worry about making mistakes.	A ❑	B ❑	C ❑
6.	Before I play hockey I am calm.	A ❑	B ❑	C ❑
7.	Setting a goal is important when playing hockey.	A ❑	B ❑	C ❑
8.	Before I play hockey I get a	A ❑	B ❑	C ❑

queasy feeling in my stomach.

9. Just before playing hockey I notice that my heart beats faster than usual. A ❑ B ❑ C ❑

10. I like to compete in games that demand considerable physical energy. A ❑ B ❑ C ❑

11. Before I play hockey I feel relaxed. A ❑ B ❑ C ❑

12. Before I play hockey I'm nervous. A ❑ B ❑ C ❑

13. Team sports are more exciting than individual sports. A ❑ B ❑ C ❑

14. I get nervous waiting to start the game. A ❑ B ❑ C ❑

15. Before I play hockey I usually get uptight. A ❑ B ❑ C ❑

APPENDIX D:

WOMEN'S ROLES AND SPORTS

Place a tick in the box which most closely indicates your opinion. Answer all questions. There are no right or wrong answers.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. Participation in sport enhances my feelings about being a woman.	❑	❑	❑	❑
2. When I participate in sport I take it seriously.	❑	❑	❑	❑
3. Men find a woman who participates in sport less attractive than one who doesn't.	❑	❑	❑	❑
4. Sports participation makes me feel good about myself as a person.	❑	❑	❑	❑
5. My role as a sportswoman conflicts with my other roles such as mother &/or partner &/or close friend.	❑	❑	❑	❑
6. Media coverage of women's sports is inadequate.	❑	❑	❑	❑
7. Men are put off by my image as a sportswoman.	❑	❑	❑	❑
8. Success in sport is very important in order for me to feel good about myself.	❑	❑	❑	❑

	Strongly Agree	Agree	Disagree	Strongly Disagree
9. I worry that time spent on sport would be better spent on other things.	❑	❑	❑	❑
10. Competing in sport makes me less attractive.	❑	❑	❑	❑
11. I prefer watching men's sports to watching women's sports.	❑	❑	❑	❑
12. The important people in my life are supportive of my sports participation.	❑	❑	❑	❑
13. Sports participation makes me feel good about myself as a woman.	❑	❑	❑	❑
14. Sports participation for women conflicts with our society's ideals of femininity.	❑	❑	❑	❑

APPENDIX E:

WOMEN'S ROLES AND SPORTS: SCORING.

Questions:		Strongly Agree	Agree	Disagree	Strongly Disagree
"Femininity"	1.	4	3	2	1
	13.	4	3	2	1
"Role Conflict"	5.	4	3	2	1
	12.	1	2	3	4
	14.	4	3	2	1
"What men think"	3.	1	2	3	4
	7.	1	2	3	4
"Self-esteem"	4.	4	3	2	1
	10.	1	2	3	4
"Importance of	2.	4	3	2	1
sport in my life"	8.	4	3	2	1
	9.	1	2	3	4
"Importance of	6.	4	3	2	1
women's sport"	11.	1	2	3	4

APPENDIX F:

WOMEN AND SPORT

The results for this study will be treated as strictly confidential. There is no need to include your name, therefore your anonymity is assured, even to the experimenter.

Please complete the background information and answer the three questionnaires honestly.

Thank you very much for your time.

---

1. **Age :**

2. **Occupation :**

3. Please briefly describe your sporting involvement, if any, and your level of involvement :

4. **Level of Education :**

5. **Height :**

6. **Weight :**

7. Please indicate whether you are :

   Married ❑ In a de facto relationship ❑ Single ❑

8. Sexual preferences vary within people. Please indicate on the scale below the point which you think best corresponds to your own sexual preference :

male female

|_____|

APPENDIX G: Summary Table of means and ANOVA summary table for SCAT scores across sport participation groups.

Table 3. Mean score on SCAT for each sport participation group.

Sport Participation Group	N	Mean	Standard Deviation
Non-competitive	18	23.17	4.66
Moderately competitive	16	18.81	3.71
Highly competitive	15	17.07	3.11

Table 4. ANOVA summary table for SCAT scores.

Source of variation	df	Mean square	F	Significance
Sex Role	2	8.870	.532	
Sport group	2	71.118	4.264	p = .021
Role x Group	4	4.829	.290	
Error	40	16.678		

APPENDIX H: Summary Table of means and ANOVA summary table for Question 12 scores across sport participation groups.

Table 9. Mean score on Question 12 for each sport participation group.

Sport Participation Group	N	Mean	Standard Deviation
Non-competitive	17*	2.12	.600
Moderately competitive	16	1.56	.512
Highly competitive	15	1.27	.457

* One subject did not answer Question 12.

Table 10. ANOVA summary table for Question 12 scores.

Source of variation	df	Mean square	F	Significance
Sex Role	2	.235	.870	
Sport group	2	1.127	4.169	p = .023
Role x Group	4	.428	1.585	
Error	39	.270		

APPENDIX I: Summary Table of means and ANOVA summary table for Question 6 scores across sport participation groups.

Table 20. Mean score on Question 6 for each sport participation group.

Sport Participation Group	N	Mean	Standard Deviation
Non-competitive	18	3.28	.752
Moderately competitive	16	3.47	.630
Highly competitive	15	4.00	0

Table 21. ANOVA summary table for Question 6 scores.

Source of variation	df	Mean square	F	Significance
Sex Role	2	.036	.096	
Sport group	2	1.672	4.432	p = .018
Role x Group	4	.102	.270	
Error	40	.377		

APPENDIX J: Summary Table of means and ANOVA summary table for Question 11 scores across sport participation groups.

Table 23. Mean score on Question 11 for each sport participation group.

Sport Participation Group	N	Mean	Standard Deviation
Non-competitive	18	2.56	.86
Moderately competitive	16	2.56	.51
Highly competitive	15	3.33	.72

Table 24. ANOVA summary table for Question 11 scores.

Source of variation	df	Mean square	F	Significance
Sex Role	2	.150	.267	
Sport group	2	1.875	3.325	p = .046
Role x Group	4	.705	1.250	
Error	40	.564		